

OKADA et al. -- 09/973,929
Attorney Docket: 007324-0283788

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A refrigerator in which a deodorizer is provided in a cold air circulation path for deodorizing an atmosphere in the refrigerator, the refrigerator further comprising a heat exchanger having a cold air inlet, the deodorizer comprising:

discharging means having a plurality of wire-shaped discharge electrodes disposed across the cold air circulation path and a flat counter electrode, the discharging means ~~[[for]]~~ producing ozone and ultraviolet rays by means of high-voltage discharge; ~~[[and]]~~

a photocatalyst module provided between the discharge electrodes and the counter electrode for decomposing an odor component and injurious matter contained in the atmosphere by means of photocatalysis; and

ozone decomposing means for decomposing the ozone produced by the discharging means, the ozone decomposing means being disposed at a downstream side of at least the discharging means and the photocatalyst module with respect to a direction in which the cold air flows and further in the cold air inlet of the heat exchanger.

- 2.-3. (Canceled)

4. (Original) A refrigerator according to claim 1, wherein two photocatalyst modules are disposed at upstream and downstream sides of the discharging means with respect to a direction in which the cold air flows, respectively.

5. (Original) A refrigerator according to claim 1, wherein the deodorizer includes a body and the photocatalyst module is attached to and detached from the body of the deodorizer.

6. (Currently amended) A refrigerator according to claim 5, wherein the photocatalyst module has a first side confronting the discharging means and a second side located opposite the first side, and the first and second sides of the photocatalyst module are ~~replaced each with the other~~ exchangeable when the photocatalyst module is attached to the body of the deodorizer so that the second side is confronting the discharging means.

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7. (Original) A refrigerator according to claim 1, wherein the photocatalyst module includes a base made from a porous ceramic and a photocatalytic material fixed to a surface of the base.
8. (Original) A refrigerator according to claim 1, further comprising control means for controlling the deodorizer so that the discharging means discharges electricity when cold air is circulated in the refrigerator.
9. (Original) A refrigerator according to claim 1, wherein the deodorizer includes a fan for blowing against the discharging means and the photocatalyst module.
10. (Original) A refrigerator according to claim 1, wherein the deodorizer includes a body, and the discharging means includes two electrodes between which electric discharge is directly performed and is attached to and detached from the body of the deodorizer.
11. (Original) A refrigerator according to claim 1, wherein the discharging means includes a pair of electrodes across which a high voltage of a negative polarity is applied so that electric discharge is performed.
12. (Original) A refrigerator according to claim 1, further comprising voltage changing means for changing a discharge voltage of the discharging means.
13. (Original) A refrigerator according to claim 1, further comprising a door closing and opening an interior of the refrigerator and control means for controlling the deodorizer so that the discharging means interrupts electric discharge when the door is opened.
14. (Original) A refrigerator according to claim 1, wherein the discharging means includes a pair of electrodes and the photocatalyst module is disposed between the electrodes of the discharging means.
15. (Original) A refrigerator according to claim 1, further comprising a refrigerator body, wherein the deodorizer is attached to and detached from the refrigerator body.

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16. (Original) A refrigerator according to claim 15, wherein at least the discharging means of the deodorizer is powered by a battery.

17.-28. (Canceled)